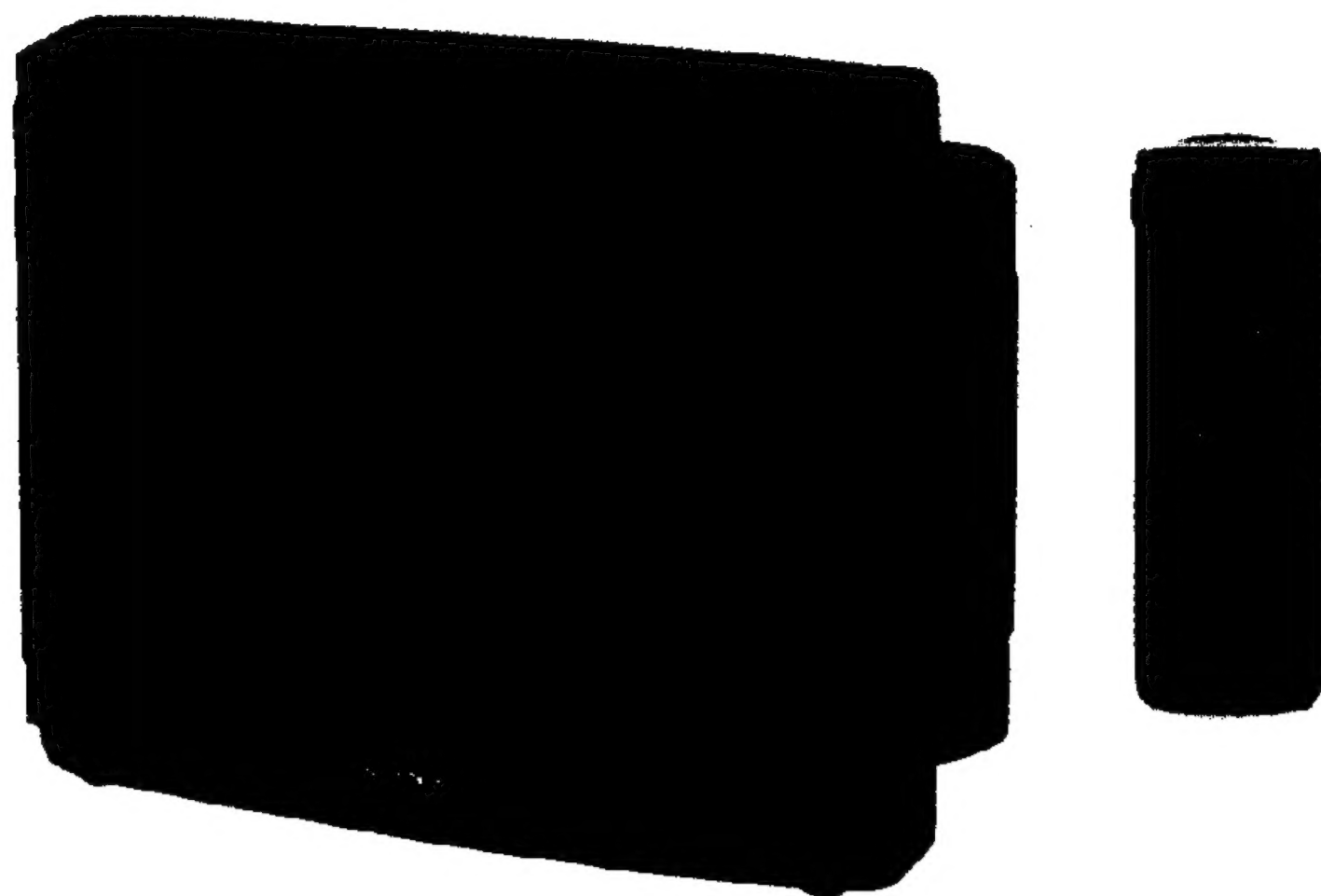


KV-A2122U/A2522U/A2922U

RM-816



UK Model

KV-A2122U

Chassis No. SCC-E23S-A

KV-A2522U

Chassis No. SCC-E23U-A

KV-A2922U

Chassis No. SCC-E23T-A

AE-1C CHASSIS

MODELS OF THE SAME SERIES

KV-A2122 U/A2522 U/A2922 U	KV-A2123E
KV-A2112U/A2512U	
KV-C2522U	

SPECIFICATIONS

【KV-A2122U/A2522U/A2922U】

Television system	I	Outputs	21-pin connector: CENELEC standard
Color system	PAL, SECAM, NTSC3.58, NTSC4.43		Headphones jack: stereo minijack
Stereo system	NICAM stereo		Audio output jacks: phono jack
Channel coverage	I		(output dependent upon TV settings)
	UHF: B 21-B 69	Sound output	30 W + 30 W 15 W + 15 W (RMS)
Picture tube	Hi-Black Trinitron tube	Power consumption	126 W (KV-A2122 U)
	Approx. 54.5 cm (21 inches)		127 W (KV-A2522 U)
	(Approx. 51 cm picture measured diagonally)	Dimensions incl. speakers	167 W (KV-A2922 U)
	100 ° -degree deflection		Approx. 615 × 439 × 448 mm (w/h/d)
	Approx. 63.5 cm (25 inches)		(KV-A2122 U)
	(Approx. 59 cm picture measured diagonally)		Approx. 677 × 501 × 481 mm (w/h/d)
	110 ° -degree deflection		(KV-A2522 U)
	Approx. 72.4 cm (29 inches)		Approx. 761 × 568 × 512 mm (w/h/d)
	(Approx. 68 cm picture measured diagonally)	Weight incl. speakers	(KV-A2922 U)
	110 ° -degree deflection		Approx. 28kg (KV-A2122 U)
Inputs	Ⓔ 1 21-pin connector:		Approx. 40kg (KV-A2522 U)
	CENELEC standard including RGB input.		Approx. 55kg (KV-A2922 U)
	Ⓔ 2 21-pin connector:		
	including S video input		
	Front : Ⓔ 3 Audio and video input jacks:		
	phono jack.		
	Including S Video input		
	Y: 1Vp-p ± 3dB 75ohm		
	C: 0.3Vp-p ± 3dB 75ohm		

-Continued on next page-



TRINITRON® COLOUR TV

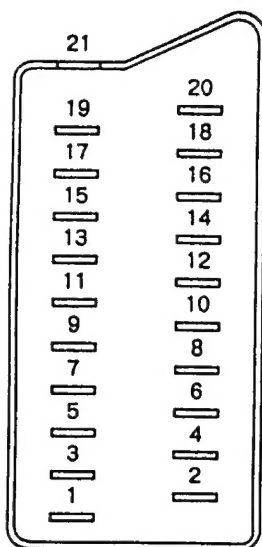
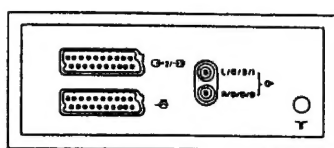
SONY®

[RM-816]

Remote control system infrared control
Power requirements 3 V dc
2 batteries IEC designation
R 6 (size AA)
Dimensions Approx. 75 × 221 × 23 mm (w/h/d)
Weight Approx. 230 g (including Batteries)

Design and specifications are subject to change without notice.

21 pin connector (—, —)



Pin No.	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
2	○	○	Audio Input B (right)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
3	○	○	Audio output A (left)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio Input A (left)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
7	○	●	Blue Input	0.7V ± 3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5 – 12V): Part mode Low state (0 – 2V): TV mode Input impedance: More than 10kohms Input capacitance: Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal: 0.7V ± 3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	—	Red Input	0.7V ± 3dB, 75ohms, positive
	—	○	(S signal) chroma input	0.3V ± 3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1 – 3V) Low state (0 – 0.4V) Input impedance: 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video Input)	
19	○	○	Video output	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
	○	—	Video Input	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
20	—	○	Video Input/Y (S signal)	1V ± 3dB, 75ohms, positive Sync: 0.3V (– 3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open)

* at 20Hz – 20kHz

4 Pin Connector (—, —, —, —)

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75ohm, positive Sync 0.3V _{+10dB}
4	C (S signal) input	0.3V ± 3dB 75ohm, positive

TABLE OF CONTENTS

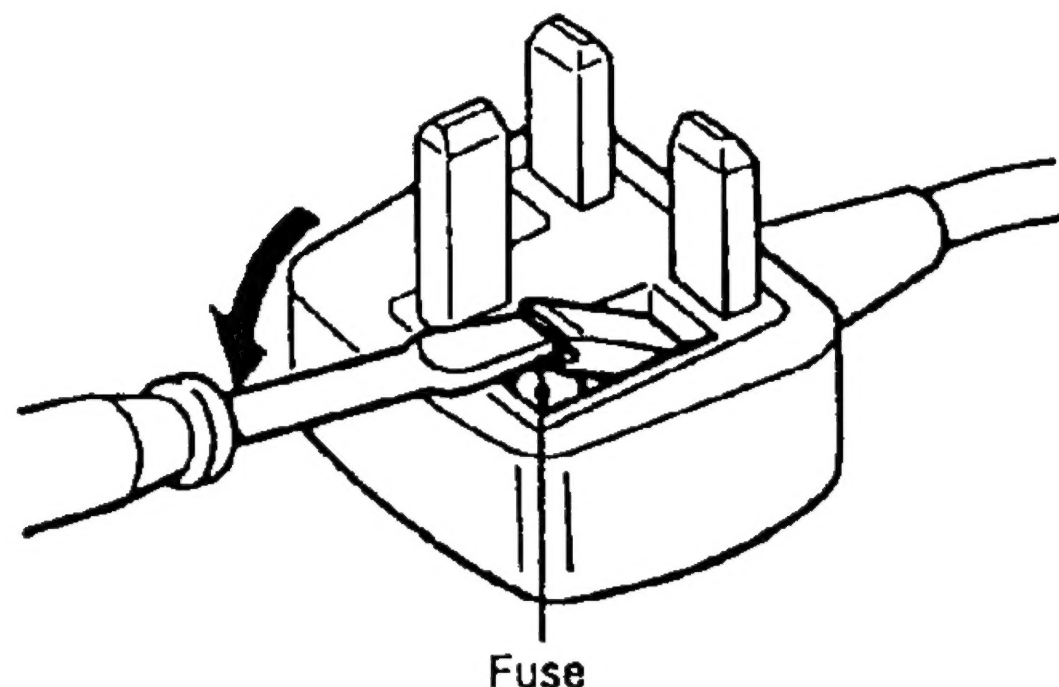
Section	Title	Page
1.	GENERAL	
1-1.	TV Channel Presetting	4
1-2.	Basic Functions	6
1-3.	Special Functions.....	6
1-4.	Use of the Teletext Service	7
1-5.	Connections and Optional Functions	9
1-6.	General Information.....	10

• CAUTION

The flexible mains lead is supplied connected to a B.S. 1363 fused plug having a fuse of 5 amp capacity. Should the fuse need to be replaced, use a 5 AMP FUSE approved by ASTA to BS 1362, i.e., carries the ⚡ mark.

How to replace the fuse

Open the fuse compartment with the blade screwdriver, and replace the fuse.



(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

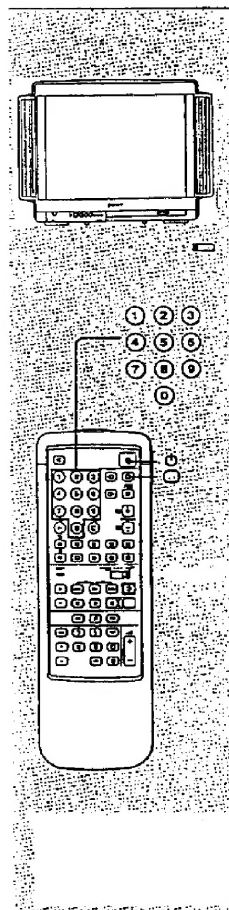
SECTION 1 GENERAL

1-1. TV CHANNEL PRESETTING

After installing the TV set, TV channels must be preset.

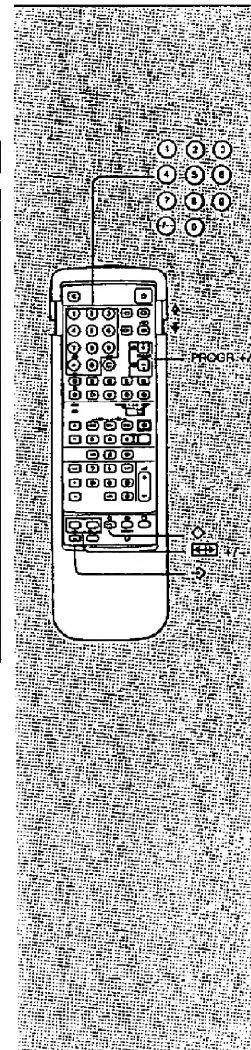
TV broadcasting stations broadcast their programmes on certain fixed frequencies (channels). In order to receive these programmes it is necessary to search for the relevant broadcasting station and to set record it as a channel. The "programme number" is the number that the user decides to associate with a certain channel.

For channel settings there are 60 positions available in the memory. In this way all stations broadcasting within the user's country can be received and recorded as a channel.



Tuning the TV unit ON and OFF

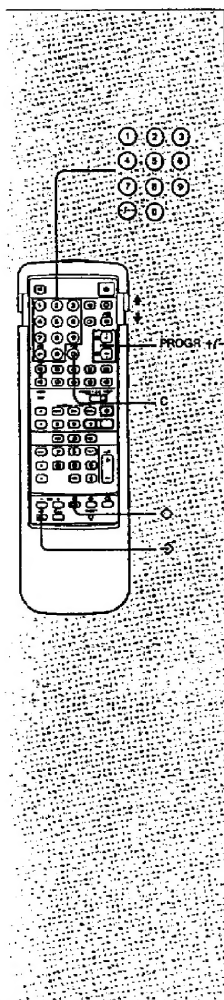
Operation	Result
1 Press on the TV set. 	The TV set will come on. Note: If no picture appears on the screen, the TV set is in the stand-by mode. In this case follow instructions given in step 2.
2 Press or one of the selection numbers of the remote control unit. 	A programme number appears on the screen.
Temporarily turning off the TV set: Press on the remote control unit.	The TV set will enter the stand-by mode. It can be turned on again by pressing the button, or the selection button of the remote control unit.
Turning off the TV set definitively: Press on the TV set.	The TV set will be turned off.



TV channels automatic presetting

If the numbers to be associated with certain TV channels are already known, the following explanation can be skipped. In this case go directly to the section "TV channels direct selection".

Operation	Result
1 Press to begin the preselection. 	The programme number flashes.
2 Press PROG + / - buttons of the remote control unit to select the channel number of the broadcasting station you want to memorize. NOTE: To select a 2-figure number press the / - button. E.g., if you wish to select number 23, press / - first, and then 2 and 3.	The programme number on the screen changes. NOTE: In case of a mistake, the "X" letter appears. Repeat once more the operation of step 2.
3 To search for broadcasting stations press + and - buttons. 	When a broadcasting station is tuned correctly, the search will stop. If you want to skip it, press + or - again.
4 Press to memorize the channel to that the broadcasting station is tuned. 	All data visualized under the channel number disappears from the screen.
5 To memorize other broadcasting stations repeat steps from 1 to 4.	

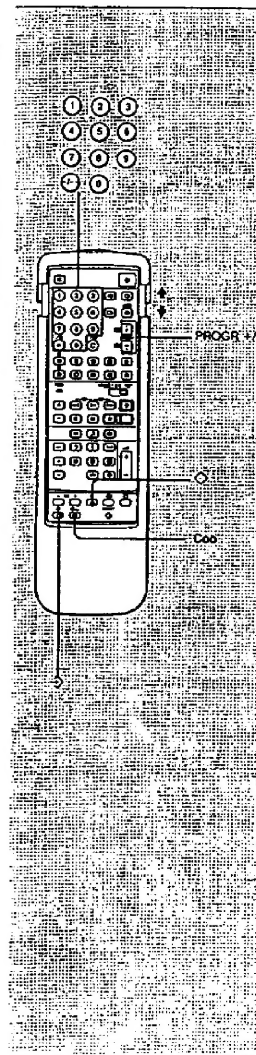


Direct TV channel setting

Direct presetting of TV channels is faster than automatic presetting. With this function any broadcasting station can be searched for and set as the desired channel.

Operation	Result
1 Press → to begin the presetting.	The programme number begins to flash on the screen.
2 Press the PROGR +/- buttons of the remote control unit to select the channel number under which you want to set the broadcasting station. Note: To select a 2-figure number press +/- button. E.g., if you wish to select number 23, press +/- first, and then 2 and 3.	The programme number on the screen changes. Note In case of mistake, the "X" letter appears on the screen. Repeat once more the operation of step 2.
3 Press C. If you wish to select a cable station press C twice.	Indication "C—" ("S—" for cable stations) flashes on the screen.
4 By using the number buttons of the remote control unit select the channel number, always with two figures (for "4" press "04"). Note: Press the second figures within 5 seconds from the first. After 5 seconds the operation is canceled.	The channel number changes on the screen.
5 Press ◊ to memorize the channel to which the station is tuned.	All indications, except the programme number, disappear from the screen.

To memorize other broadcasting stations repeat the above procedure.



Exclusion of programmes

Once all desired stations have been memorized, unoccupied channel numbers, with stations of inferior quality signals can be excluded. The undesired channels can be excluded by using the PROGR + and - buttons.

Operation	Result
1 Press → to begin presetting.	The programme number begins to flash on the screen.
2 By acting on the PROGR + and - buttons, or on the number keys of the remote control unit, select the programme number you wish to exclude. 	The programme number changes.
3 Press Coo.	Under the programme number, the preceding channel number appears.
4 Press ◊.	All indications under the programme number disappear from the screen. The excluded programme number will be memorized.

NoteNote
 Undesired channels can be excluded only by using PROGR + and - keys. Excluded programme numbers appear on the screen if you press the number keys of the remote control unit.

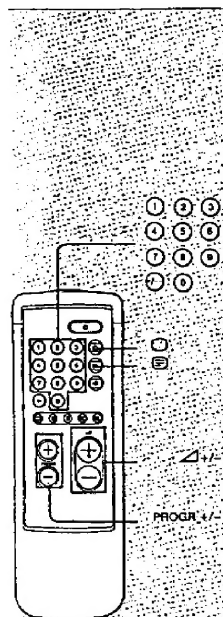
Use of additional tuning functions

Temporary channel tuning

It is possible to temporarily memorize a channel, even if it has not been preset.

Operation	Result
1 Press C. Press C twice for a cable station.	"C" ("S" for cable stations) indication appears on the screen.
2 Using the number keys of the remote control unit select the channel number, always with two figures (e.g., "04" for channel "4").	The channel will be received, but it will not be set as a programme number.

1-2. BASIC FUNCTIONS



This section of the manual explains the use of the two fundamental functions of the TV set, selection of TV programmes and volume control.

Use the "simple" side of the remote control unit.

Programme selection

Before selecting programmes make sure that TV channels have been memorized.

Operation	Result
1 Turn the TV set on. 	
2 Press PROG + /- buttons or the number keys of the remote control unit. To select a 2-figure number press +/- button. E.g., if you wish to select number 23, press +/- first, and then 2 and 3. 	The selected programme number appears on the screen.

Volume control

Operation	Result
Press + or -.	The volume indication appears on the screen.

Use of additional functions

Use of other functions with the TV set buttons

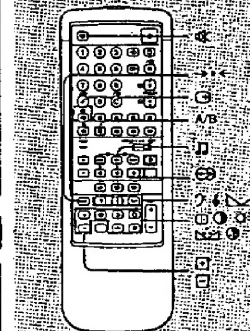
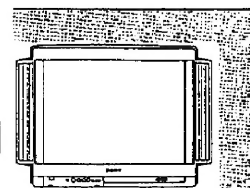
It is also possible to select programmes and to adjust the volume by using P → and and + or - buttons, located on the front panel of the TV set. In this case, press first P → → until the indication P (channel) or (volume) appears on the screen, and then press + or - buttons.

Use of teletext service

Press . To revert to the TV mode, press . For further information on the teletext service.

— 9 —

1-3. SPECIAL FUNCTIONS



This section explains the use of functions for adjusting pictures and sound; for inserting on the screen the name of a channel; and for fine tuning of a channel.

Use the "complete" side of the remote control unit.

Use of special functions

The following functions can be used.

Function	Operation	Reset
Indication display	Press	Press again.
Sound muting	Press	Press again.
Language selection for bilingual programmes.	Press A/B. The selected language is displayed by the relevant indication on the screen.	Press A/B.
Sound adjustment for music programmes.	Press	Press again.
Use of special sound effects.	Press	Press again.
Time display (only during teletext broadcasting).	Press	Press again.

Picture and sound adjustment

Although picture and sound adjustment has already been performed in the factory, it is still possible to make them more suitable to one's own taste. The following table shows all available functions and their effects.

Function	Controls to be used	Result
Button selection		The symbol appears on the screen.
Adjustment of the selected function		The level has been adjusted.

Picture adjustment

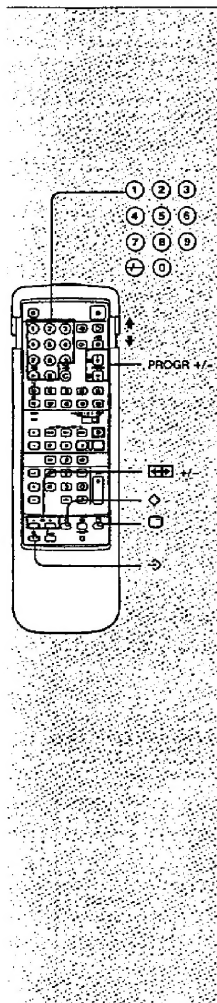
Adjustment	Symbol	Result (+ -- -)
Colour		Further or lesser colour intensity
Contrast		Further or lesser contrast
Brightness		Bright (++) dark
Hue (for NTSC only)		More red -- more green
Picture definition		More definition -- less definition

Sound adjustment

Adjustment	Symbol	Result (+ -- -)
Bass		More of low frequencies -- less of low frequencies
Treble		More of high frequencies -- less of high frequencies
Speakers balance		Volume increase from right speaker -- Volume increase from left speaker

Reversion to the original adjustment

Press .



Broadcasting station identification

By associating a name with a certain broadcasting station it is possible to avoid having to remember, each time, in which channel number that particular station has been memorized.

Five different characters are available for station identification.

Operation		Result
1 By using PROGR + or -, or the number keys of the remote control unit, select the programme number to be set for identification.		The programme number to be set for identification appears on the screen.
2 Press		The number flashes on the screen.
3 Press		The first indication line flashes on the screen.
4 Using the + or - buttons select a letter of the alphabet, a number, or a blank space.		Alphabet letters, numbers or a blank space (" ") appear on the screen, in that order.
5 Press		In this way the first character has been set, and the following position now flashes on the screen.
6 Repeat steps 4 and 5, and fill all five available spaces.		
7 Press		All indications under the programme number disappear from the screen. All indications remaining on the screen have been memorized.

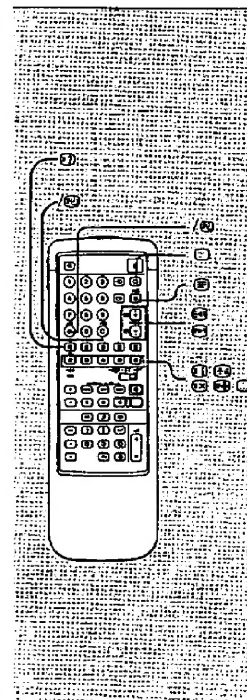
Manual fine tuning

If the picture is not perfect, it is possible to fine tune it manually.

Operation	Result
Press + or - repeatedly until the picture is at the optimum.	The indication →F← appears on the screen.
Press to start preselection.	The programme number starts flashing on the screen.
Press .	Manual fine tuning has been memorized.

Note: Manual fine tuning will be reset when the channel is selected again.

1-4. USE OF THE TELETEXT SERVICE



Through the teletext service a great deal of information can be received at any time. Broadcasting stations make this service available through TV broadcasts. To use the teletext service, use the green keys on the "complete" side of the remote control unit. When the "simple" side of the remote control unit is used, only the basic functions are available.

How to display teletext service

Operation	Result
1 Select the channel you want to watch.	The channel changes on the screen.
2 Press	If there is no teletext signal, the indication "Page 100" appears on the screen.
3 Use the number keys of the remote control unit to insert the three figures corresponding to the desired teletext page. Note In case of a mistake, press any three numbers, and then repeat the operation with the correct numbers.	The selected page number appears on the screen. After a few seconds, the selected page appears on the screen.
To revert to normal TV programmes: Press . To change teletext channel: First press to revert to the TV mode, and then repeat procedure steps 1 to 3.	

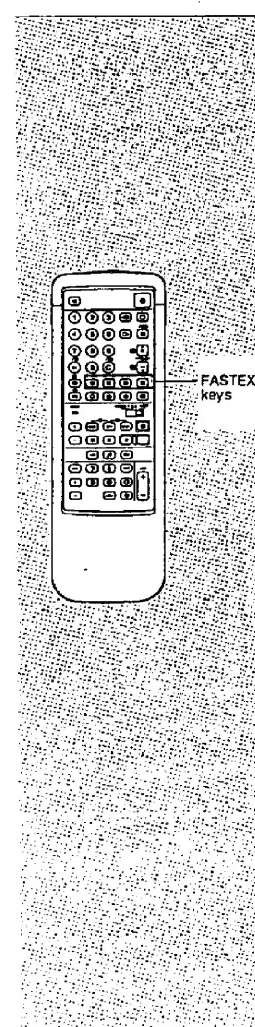
Note: A weak TV signal may cause troubles in the use of teletext.

Use of special teletext functions

Required function	Operation	Result (on the screen)
Page index required.	Press (INDEX).	Page index appears.
Sub-pages required (page 888).	Press	The sub-page appears (page 888).
Access to previous or following pages.	Press (PAGE +) or (PAGE -).	The preceding or the following page appears.

Required function	Operation	Result (on the screen)
Superimposition of the teletext on the TV programme.	In the TV mode, press twice. To revert to the normal teletext function press again.	 Teletext information will appear superimposed on the TV programme.
To prevent page changes due to page up-dating.	Press (STILL). Press (TXT/MIX) to revert to the normal function.	 The (STILL) symbol appears on the screen.
Magnification of teletext characters.	Press once to magnify the upper half of the screen. Press twice to magnify the lower half of the screen. Pressing the button three times the normal vision is restored.	 The upper or the lower half of the page is magnified.
Display of hidden information (answers to quizzes, ecc.).	Press (RIV). Press again to hide the answers.	 The information is displayed.
Watching a programme while the teletext searches for the required page.	1. Ask again for the page.	The number is displayed.
	2. Press .	TV programme is displayed.
	3. When the required page has been found, the page number will be displayed.	 P201
	4. Press to display the page.	The desired page will be displayed.
Display of a page at a preset time.	1. Request the page.	The selected page will be displayed.
	2. Press (MEM.T).	In the lower part of the screen the indication "T*****" appears.
	3. Set the required time by using the number keys, and by inputting four figures (e.g. 0730 for "7:30").	The required time is displayed on the screen.
	To watch TV programmes until a preset time Press (CANC.). At the required time, the selected page appears in the upper part of the screen. Press to display the page. To cancel the request Display the teletext page and then press (CANC.M.).	

Note: Depending on the teletext service, certain functions may not be available.



Use of the FASTEXT function

The FASTEXT function allows rapid access, at the touch of a single button, to the teletext functions. In the lower part of the screen, a colour coded index will be displayed when a FASTEXT teletext page is broadcasted. Each colour corresponds to the coloured keys on the remote control unit.

Operation

Operation	Result
Press one of the coloured key on the remote control unit corresponding to the coloured indications of the FASTEXT teletext page.	The selected teletext page appears on the screen.

Note

The correct use of the FASTEXT teletext function depends on the signal being broadcast by the TV stations. Some TV stations may not broadcast FASTEXT teletext signal.

1-5. CONNECTIONS AND OPTIONAL FUNCTIONS

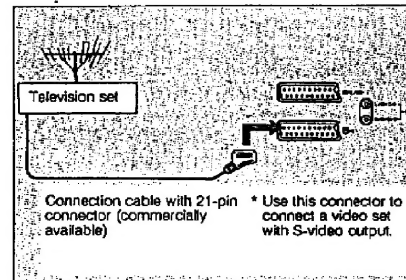
This TV set may be connected to other audio/video machines, such as videocameras, VTRs, videodisc players, or stereo systems.

Connection to an external audio/video system

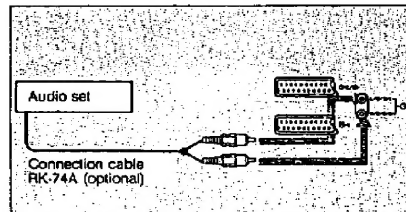
This TV set incorporates three groups of connectors, for input and output to the TV signal. Each group has the following characteristics.

Connector	Input signal	Output signal
Ⓔ-1	Normal audio/video signal or RGB signal	TV tuner audio/video signal
Ⓔ-2/Ⓔ-3	Normal audio/video signal and S-video signal	Audio/video signal from a selectable source
Ⓔ-4, Ⓔ-5, Ⓔ-6 front panel	Normal audio/video signal and S-video signal	No signal

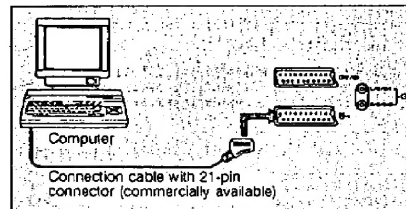
Connection of a TV set



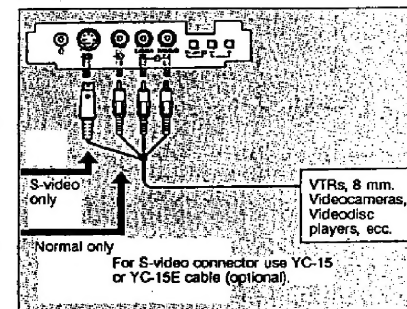
Connection of an audio unit



Connection to a computer with RGB output



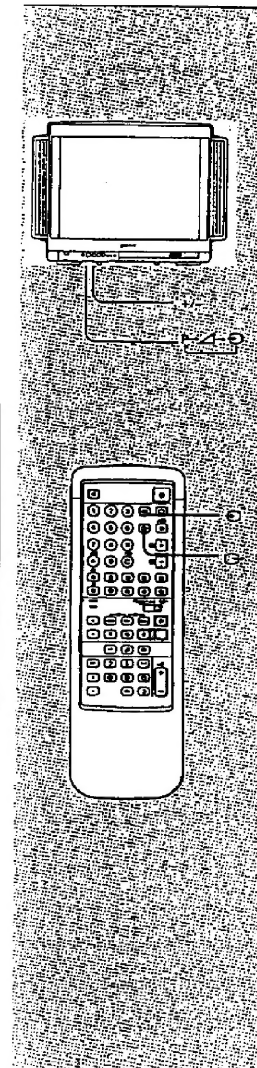
Temporary connection of video apparatus
For a temporary connection (e.g. of a videocamera) use the front panel terminals.



Connection of a video taperecorder through the "r" connector
Connect the antenna input (AERIAL-IN) of the TV set to the antenna output (AERIAL-OUT) of the video taperecorder.

S-video input (Y/C input)
The video signal is formed by two separate signals: the luminance (Y) and the chrominance (C). Through the separation of the two signals it is possible to improve picture quality (luminance in particular), preventing reciprocal interferences. This TV set features two S-video sockets able to directly receive this type of signal.

Pictures with distortion
Move the TV set away from the video taperecorder if pictures or sound become distorted.



Video programme playback

Using the input selector, pictures coming from a video taperecorder connected to the TV set's input, may be played back.

Operation

Operation	Result
Select the desired video input by pressing Ⓔ repeatedly.	The symbol of the selected input appears on the screen (see table hereunder).
Press Ⓔ button to revert to TV mode.	

Selectable inputs

Symbol	Selected input
Ⓔ-1	Audio/video signal from Ⓔ-1 connector.
Ⓔ	RGB signal from Ⓔ-1 connector.
Ⓔ-2	Audio/video signal from Ⓔ-2/Ⓔ-3 connector.
Ⓔ-3	S-video signal (from a VTR with S-video output) from Ⓔ-2/Ⓔ-3 connector.
Ⓔ-4	Audio/video signal from Ⓔ-4, Ⓔ-5 connector located on the front panel.
Ⓔ-5	S-video signal from S-video Ⓔ-4 (4 pin) connector located on the front panel.
Input can be selected also with Ⓔ-1, Ⓔ-2, Ⓔ-3 buttons of the TV set.	
In this case, first select Ⓔ, and then press the + / - buttons to select the desired input.	

Selection of video output from a Ⓔ-2/Ⓔ-3 connector

The Ⓔ-2/Ⓔ-3 connector may output 4 video signals. Select the outgoing video signal in the following way.

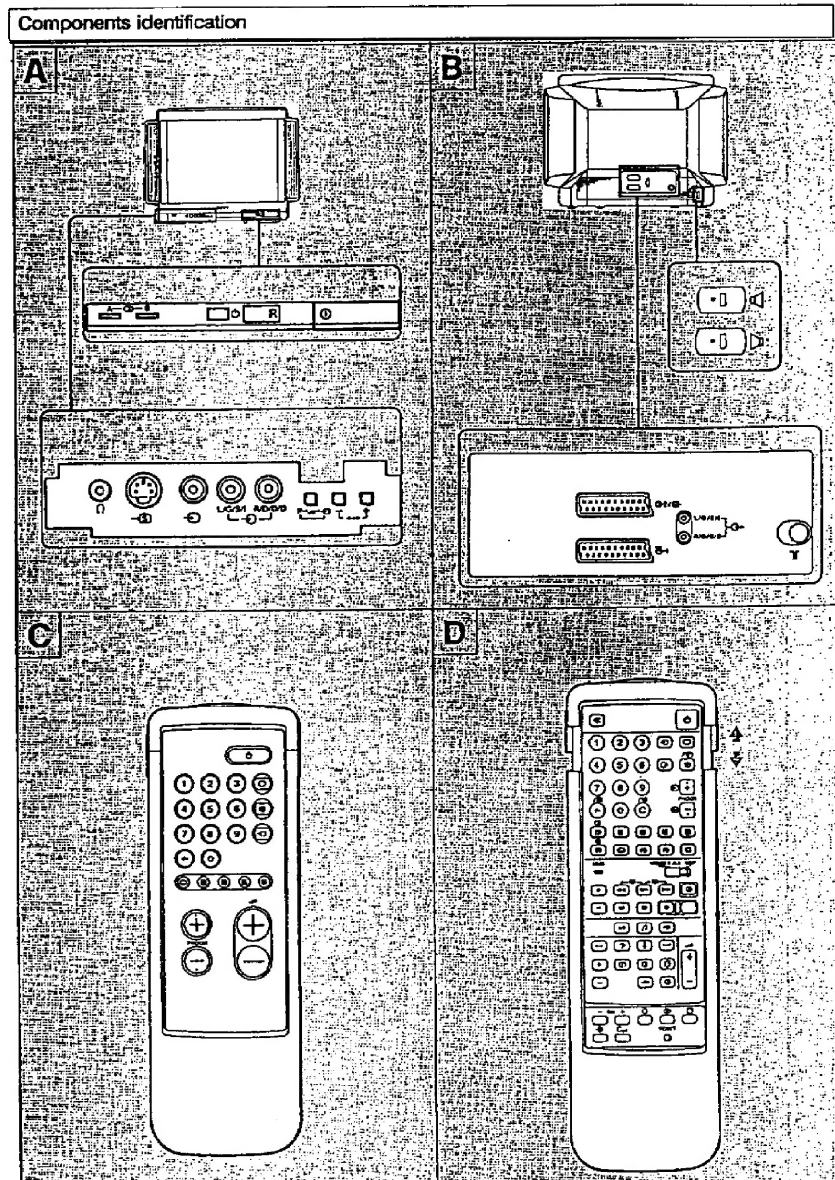
Operation

Operation	Result
Press Ⓔ repeatedly to select the desired video input.	The selected video input symbol appears on the screen (see the table following).

Output signal

Symbol	Selected output
1 Ⓔ	Audio/video signal from Ⓔ-1 connector.
2 Ⓔ	Audio/video signal from Ⓔ-2/Ⓔ-3 connector.
3 Ⓔ	Audio/video signal from Ⓔ-4 and Ⓔ-5 connectors.
TV Ⓔ	Audio/video signal from T-type antenna connector Ⓔ.

1-6. GENERAL INFORMATION



This section briefly describes controls of the TV set and the remote control unit, and their relevant functions.

A TV set front panel	
Indication	Description
	Power switch
	Stand-by switch
	Bilingual function indications
	Headphones connector (stereo mini-jack)
	Input connectors (S-video/video/audio)
	Function selector (programme/volume/input)
	Function adjustment keys

B TV set rear panel	
Indication	Description
	Speaker connectors (upper: left speaker; lower: right speaker)
	Connector 2, Euro AV (SCART, 21-pin). S-video in/video in/TV/video out signals.
	Connector 1, Euro AV (SCART, 21-pin). RGB in/video in/TV/out signals.
	Audio output connectors (RCA pin)
	Antenna connector (of IEC standard)

C Remote control unit — simplified side	
Indication	Description
	Input selector
	Teletext service key
	TV set power switch and TV mode selector
	Standby key
1,2,3,4,5,6,7,8,9,0	Number keys
	Channel selection key/ 2-figure programmes
	Volume adjustment key
PROGR +/-	Programme selection key

D Remote control unit — complete side	
Indication	Description
	Sound muting key
	Standby key
1,2,3,4,5,6,7,8,9,0	Number keys
	Input selector
	TV set power switch and TV mode selector
	Output selector
	Teletext key
	Music programme key
A/B	Bilingual programmes language selection
	Channel selection key/ 2-figure programmes
C	Channel direct selection key
	Special sound effect key
	Time display
	Teletext operation keys
	Display key
	Reset key
	Volume adjustment keys
PROGR +/-	Programme selection keys
	Image and audio adjustment keys
MEM	MEM light indication
VIDEO 1/2/3, MDP	Video unit selector
	Video units function key
	Programme cancelling key
	Channel presetting key
	Channel tuning keys
	Channel storing keys
	Broadcasting stations identification key
RESET	Cancel key